

WHAT IS CLAIMED IS:

1. A method of processing a sequence of audio samples, each of said samples being stored within a respective packet, said method comprising  
retrieving a packet from an input buffer;  
determining at least one parameter of audio information contained within said packet;  
and  
adapting the determined parameter to provide an appropriate parameter transition to audio information within a nonsequentially following packet.
2. The method of claim 1, wherein the audio information parameter comprises a pitch.
3. The method of claim 1, wherein said appropriate parameter transition is at least a portion of a pitch period.
4. The method of claim 3, wherein said at least a portion of a pitch period is synthesized to bridge a gap between said retrieved and nonsequential packet.
5. A method of claim 1 further comprising:  
determining a scheduled play out time of the audio information within the nonsequential packet.
6. The method of claim 1, further comprising:  
determining an estimated time of arrival (ETA) of a sequentially following packet.
7. The method of claim 6, wherein a target play time comprises the ETA and a latency period of said sequentially following packet.

8. The method of claim 5, wherein the play time of audio information within the nonsequential packet is reduced in response to an early arrival of a sequentially following packet.
9. The method of claim 8, wherein the play time of audio information within the nonsequential packet is not reduced by a factor greater than two.
10. The method of claim 9, wherein the play time of audio information within said nonsequential packet is reduced by deleting a pitch period contained within the said audio information.
11. The method of claim 7, wherein the play time of audio information within the nonsequential packet is expanded if a next packet arrives during its latency period. .
12. The method of claim 11, wherein the play time of audio information within said nonsequential packet is expanded by copying pitch periods contained within said audio information of said nonsequential packet.
13. An apparatus comprising:  
a first VoIP gateway for retrieving a packet from an input buffer,  
said first VoIP gateway determining at least one parameter of audio information contained within said packet,  
said first VoIP gateway adapting the determined parameter to provide an appropriate parameter transition to audio information within a nonsequentially following packet.
14. The apparatus of claim 13, wherein the audio information parameter comprises a pitch.

15. The apparatus of claim 13, wherein said appropriate parameter transition is at least a portion of a pitch period.

16. The apparatus of claim 15, wherein said at least a portion of a pitch period is synthesized to bridge a gap between said retrieved and nonsequential packet.

17. A method of claim 13, wherein said first VoIP gateway determines a scheduled play out time of the audio information within the nonsequential packet.

18. The apparatus of claim 13, wherein said first VoIP gateway determines an estimated time of arrival (ETA) of a sequentially following packet.

19. The apparatus of claim 18, wherein a target play time comprises the ETA and a latency period of said sequentially following packet.

20. The apparatus of claim 17, wherein the play time of audio information within the nonsequential packet is reduced in response to an early arrival of a sequentially following packet.

21. The apparatus of claim 20, wherein the play time of audio information within the nonsequential packet is not reduced by a factor greater than two.

22. The apparatus of claim 21, wherein the play time of audio information within said nonsequential packet is reduced by deleting a pitch period contained within the said audio information.

23. The apparatus of claim 19, wherein the play time of audio information within the nonsequential packet is expanded if a next packet arrives during its latency period. .

24. The apparatus of claim 23, wherein the play time of audio information within said nonsequential packet is expanded by copying pitch periods contained within said audio information of said nonsequential packet.

25. An apparatus for expanding and reducing audio information within packets, comprising:

a processor; and

a storage device coupled to said processor for controlling said processor, said processor operative with said instructions to:

retrieve a packet from an input buffer;

determine at least one parameter of audio information contained within said packet; and

adapt the determined parameter to provide an appropriate parameter transition to audio information within a nonsequentially following packet.

26. A computer readable medium having stored thereon a plurality of instructions including instructions which, when executed by a processor, ensures the processor to perform a method comprising:

retrieving a packet from an input buffer;

determining at least one parameter of audio information contained within said packet;

and

adapting the determined parameter to provide an appropriate parameter transition to audio information within a nonsequentially following packet.

27. A method of processing a sequence of audio samples, each of said samples being stored within a respective packet, said method comprising:

retrieving a packet from an input buffer;

determining a pitch within said audio samples for each retrieved packet;

adjusting a play time for said retrieved packet based on a time of arrival of a sequentially following packet.

28. The method of claim 27, further comprising:  
determining an estimated time of arrival (ETA) for the said sequentially following packet.
29. The method of claim 28, wherein said play time is a target play time.
30. The method of claim 29, wherein said target play time includes the ETA of said sequentially following packet and a latency period.
31. The method of claim 30 further comprising:  
expanding the play time of said retrieved packet when said sequentially following packet arrives during its latency period.
32. The method of claim 31, wherein the play time of the retrieved packet is expanded by copying pitch periods contained within said retrieved packet.
33. The method of claim 29 further comprising:  
reducing the play time of said sequentially following packet when a subsequent sequentially following packet arrives before its ETA.
34. The method of claim 33, wherein the play time of the sequentially following packet is reduced by removing a pitch period within said sequentially following packet.
35. The method of claim 34, wherein the step of reducing is implemented to compensate for the step of expanding.